

# Gulf of Mexico Hydrates R&D Planning Workshop

August 9-10, 2000

Adam's Mark Hotel  
Houston, Texas



*Sponsored by:*

U.S. DOE National Energy Technology Laboratory  
and  
Chevron Petroleum Technology Company





*U.S. Department of Energy*

*National Energy Technology Laboratory*



June 28, 2000

Dear Colleague:

As a key individual in the gas hydrates area, you are invited to participate in a workshop to formulate an action plan for the Gulf of Mexico portion of the Department of Energy's (DOE) Methane Hydrates R&D Program. On August 9 and 10, 2000, the U.S. DOE's National Energy Technology Laboratory (NETL) and Chevron Petroleum Technology Company (Chevron) will host a collaborative workshop at the Adam's Mark Hotel in Houston, Texas. The purpose of the workshop is to introduce you to, and gather your input for, a new gas hydrate initiative that can result in Joint Industry Projects (JIPs) focusing on the Gulf of Mexico. Workshop attendees will include participants from industry, national laboratories, universities, and government organizations.

The Gulf of Mexico Hydrates R&D Program is part of DOE's initiative to promote and apply advances in exploration and production to the understanding and development of gas hydrates as a resource. Gas hydrates, although not likely to become an economic natural gas resource for several years, could significantly alter the balance of world energy. This workshop will summarize the status and determine the future direction of research in the areas of drilling safely, long-term production through hydrates, sea floor stability, resource characterization, and production technology in the Gulf of Mexico.

The agenda includes an initial plenary session featuring presentations on DOE's R&D Program, industry perspectives and activities, other government agency programs, and university programs. Following the plenary session, several parallel breakout sessions will address technology areas that are considered key to the development of gas hydrates in the Gulf of Mexico. There will also be a poster session during the first day's evening reception hosted by Chevron. A presentation of near-term JIP opportunities will conclude the workshop program. Following the workshop, Chevron will conduct an invitation-only JIP planning session for industry participants.

If you are interested in participating in this workshop, please complete and submit the workshop registration form, participation preference form, and, if needed, the foreign national visitor's form. These forms are located in the back of this flyer. Your participation is needed to help structure a challenge to the natural gas community; a challenge that will result in critical and substantial gas hydrate improvements in cost and application.

Sincerely,

Rita A. Bajura  
Director, NETL

# PRELIMINARY AGENDA

---

## Gulf of Mexico Hydrates R&D Planning Workshop

**Wednesday, August 9, 2000**

- 7:30 a.m.      *Registration and Continental Breakfast*  
*Participants may also register Tuesday evening from 6:00 to 9:00 p.m.*
- 8:15 a.m.      **Welcome**  
Rita A. Bajura, Director  
U.S. DOE, National Energy Technology Laboratory
- 8:30 a.m.      **DOE National Hydrates Program Overview**  
Brad Tomer, Gas Exploration, Production & Storage Product Manager  
U.S. DOE, National Energy Technology Laboratory
- 9:00 a.m.      **Industry Perspectives**  
Emrys Jones, Director  
Chevron Petroleum Technology Company
- Steve Holditch, Schlumberger Fellow  
Schlumberger Technology Corporation
- William Maurer, President  
Maurer Engineering
- Other Invitees
- 10:15 a.m.      *Break*
- 10:30 a.m.      **Project Reviews** (15 minutes each)  
Lorie Lang, Oak Ridge National Laboratory  
William Dillion and Timothy Collett, U.S. Geological Survey  
J. Robert Woolsey, University of Mississippi  
Roger Sassen, Texas A&M University  
Joseph Gettrust, U.S. Naval Research Laboratory  
Andrew Sheppard, National Oceanic and Atmospheric Administration  
Other Invitees
- 12:30 p.m.      *Lunch*

---

1:30 p.m.            **Breakout Sessions**

- Drilling Safely
- Long-Term Production Through Hydrates
- Sea Floor Stability
- Resource Characterization
- Production Technology

3:00 p.m.            *Break*

3:15 p.m.            **Breakout Sessions** (continued)

4:30 p.m.            *Adjourn*

5:30 - 7:30 p.m.    *Reception Hosted by Chevron*  
*Poster Session*

### **Thursday, August 10, 2000**

7:30 a.m.            *Registration and Continental Breakfast*

8:30 a.m.            **Breakout Sessions**

- Drilling Safely
- Long-Term Production Through Hydrates
- Sea Floor Stability
- Resource Characterization
- Production Technology

10:00 a.m.           *Break*

10:15 a.m.           **Summary of Breakout Sessions** (15 minutes per topic)

11:30 a.m.           **Joint Industry Project Opportunities**  
Craig Lewis, Senior Staff Research Scientist  
Chevron Petroleum Technology Company

11:45 a.m.           **Wrap-Up and Thanks**  
Brad Tomer, Gas Exploration, Production & Storage Product Manager  
U.S. DOE, National Energy Technology Laboratory

11:50 a.m.           *Adjourn*

Following the workshop, Chevron will conduct a Joint Industry Project (JIP) formation meeting for industry participants intent in funding JIPs. Participation is by invitation only.

# PRELIMINARY AGENDA

---

## **Joint Industry Project (JIP) Formation Meeting** *Working Session for Industry Participants*

After the close of the official workshop, Chevron will host an afternoon session for potential JIP partners. The objectives of this session are as follows:

- Identify those companies interested in working toward the formation of a JIP,
- Understand the concerns and interests of potential partners,
- Develop a roadmap of activities and meetings leading to the formation of the JIP within a defined time frame,
- Define the working relationships between JIP partners,
- Develop a draft work plan, cost estimate, and time line for the JIP, and
- Outline a strategy for securing DOE funding and involvement.

### **Thursday, August 10, 2000**

12:00 p.m.	<i>Lunch</i>
12:45 p.m.	<b>Welcome, Agenda, and Introductions</b> Emrys Jones, Chevron
1:00 p.m.	<b>JIP Overview</b> Craig Lewis, Chevron
1:15 p.m.	<b>JIP Program Definition Based on the Workshop</b> Craig Lewis, Chevron
1:45 p.m.	<b>JIP Structure and Partnership Issues</b> Craig Lewis, Chevron
2:00 p.m.	<b>Enablers to Participation</b> Emrys Jones, Chevron
2:30 p.m.	<i>Break</i>
2:45 p.m.	<b>DOE Solicitation Process and Schedule</b> Brad Tomer, U.S. DOE NETL
3:00 p.m.	<b>Feedback from Meeting Participants</b>

# GAME PLAN

---

## Gulf of Mexico Hydrates R&D Planning Workshop

### Purpose

The purpose of the workshop is to develop a plan to address hydrate R&D needs in the areas of drilling safely, long-term production through hydrates, sea floor stability, resource characterization, and production technology in the Gulf of Mexico. In this workshop, participants will help define the major technical opportunities that can help achieve the vision and goals of the National Methane Hydrate Multi-Year R&D Program Plan with emphasis on the Gulf of Mexico. The workshop results will be used to guide the development of an action plan that will serve as a framework for industry and government in implementing collaborative R&D activities.

### Program Goals

Methane hydrates represent a potentially enormous natural gas resource. Estimates range as high as 700,000 trillion cubic feet (Tcf) worldwide, many times the estimated total in conventional resources of natural gas. The United States hydrates resource is at 100,000 to 300,000 Tcf. The DOE Office of Fossil Energy, in collaboration with other agencies, academia, and industry, is poised to implement a program that builds upon the existing knowledge base to investigate and obtain the information necessary to bring methane hydrates into the natural gas resource base and to ensure safe drilling operations in and around hydrate formations.

The National Methane Hydrate Multi-Year R&D Program Plan illustrates how technology is expected to proceed from the current state of the art to the technological level needed to achieve program goals. The Federal role provides the coordination, integration, and synthesis of research efforts needed to

- Establish an estimate of the gas resource from methane hydrate deposits,
- Develop the technology necessary for the commercial production of methane from hydrates,
- Understand and quantify the dual roles of methane hydrates in the global carbon cycle and their relationship to global climate change, and
- Respond to industry concerns regarding safety and sea floor stability issues to methane hydrates that are associated with the exploration, production, and transportation of conventional hydrocarbons.

The R&D program is framed as four technology areas that share data, theoretical concepts, and results. The four technology areas include resource characterization, production, global carbon cycle, and safety and sea floor stability.

---

## Expected Outcomes

Through the workshop, we will identify

- Key barriers to meeting the hydrates program goals,
- R&D opportunities to overcome these barriers,
- Collaboration opportunities and define an action plan, and
- Joint Industry Projects (JIPs) for potential funding over the next couple of years.

The workshop is expected to cultivate a dialog within the industry on how to develop strategic alliances between industry, academia, and government.

## Workshop Format

The workshop will be a 1½-day facilitated meeting that will take place on August 9 and 10, 2000, at the Adam's Mark Hotel in Houston, Texas. The workshop will bring together up to 75 experts from the natural gas industry to develop industry input on R&D opportunities and direction. The facilitated format is structured to optimize the use of time, while maintaining flexibility to permit lively discussion of ideas.

The following guidance will help you prepare for the workshop:

***Prior to the Workshop*** — Participants should consider the major competitive issues and market drivers that will shape their businesses within the next 10 years and how this will affect requirements for technology and technology partnerships.

***During the Workshop*** — Participants will actively share ideas through facilitated sessions. Structured brainstorming and critical analysis will be used to identify barriers and technology opportunities and to build consensus on collaborative actions. Participants should come prepared to work. **Bring your ideas and wear business casual (no coats), comfortable clothes** — all the materials you may need will be provided.

***After the Workshop*** — A draft report will be prepared and circulated to participants for review and comment. Additional material may be sought to clarify points and provide technical insight, although any consensus results of the workshop will not be changed. After all comments are received and integrated, a final report will be issued.

## For More Information

**Technical Contact:** Brad Tomer, NETL, 304-285-4692 or [brad.tomer@netl.doe.gov](mailto:brad.tomer@netl.doe.gov)

**Event Planning:** NETL Event Management, 304-285-4750, 1-800-553-7681, or [confserv@netl.doe.gov](mailto:confserv@netl.doe.gov)

# GENERAL INFORMATION

---

## **Registration/Food Service Fees: \$70 - Non-Federal / \$58 - U.S. Government**

This fee covers the cost of continental breakfast, breaks, and lunch on Wednesday, August 9, and continental breakfast and a morning break on Thursday, August 10. Per GSA regulation, the cost of refreshments during breaks will be paid for U.S. Government employees by the U.S. Department of Energy.

*Chevron will be hosting an evening reception on Wednesday, August 9, 2000.*

**All attendees, including presenters, must register for the workshop. Registration is limited to 75 attendees.**

The registration deadline is July 21, 2000. To register, complete the registration form, participation preference form, and, if needed, the foreign national visitor's form, and mail or fax them to NETL Event Management. These forms are located in the back of this flyer.

Payment of the registration fee may be made by check, money order, or by credit card. Make your check or money order payable to **Adam's Mark Houston** and attach to your registration form, or complete the credit card information on the registration form. **Registration fees cannot be refunded after July 21, 2000.**

### **FOREIGN NATIONAL VISITOR NOTICE**

All foreign nationals who wish to attend DOE sponsored conferences, meetings, workshops, or seminars are required to submit NETL Form F142.1-1 requesting a DOE unclassified visit. A minimum of 30 days advance notice is required for the review and approval process for unclassified foreign national visits. A foreign national is any person who is not a U.S. citizen and includes permanent resident aliens (PRAs or "green card holder").

NETL supports an active program of unclassified visits by foreign nationals. International cooperation and collaboration is an important element within our programs. NETL is required to ensure that these visits are conducted under prescribed conditions in a manner consistent with the U.S. Department of Energy's policies.

**The NETL Foreign National Visitor Form F142.1-1 is located in the back of this flyer. Submit the form as soon as possible to NETL Event Management, who will coordinate the process and make approval notification.**

### **NETL EVENT MANAGEMENT INFORMATION**

Phone: 304 285-4750 or 1-800-553-7681      Fax: 304 285-4459

E-mail: [confserv@netl.doe.gov](mailto:confserv@netl.doe.gov)

Web site: [www.netl.doe.gov](http://www.netl.doe.gov)



# HOTEL INFORMATION

---

The **Adam's Mark Hotel**, located at 2900 Briarpark Drive, Houston, Texas, will be the official hotel for the workshop. The workshop guest room rate is \$109.00 for single occupancy and \$119.00 for double occupancy. The Federal per diem rate of \$72.00 will be honored for those presenting Government identification. Federal per diem must be requested when the reservation is made.

To make your reservation, contact the hotel directly at **1-800-436-2326**. You must reference the **Gulf of Mexico Hydrates R&D Planning Workshop** to receive the special room rates listed above. Reservation requests must be made with a check, money order, or a major credit card guaranteeing the first night's room rate. A block of rooms will be held for this workshop until **July 21, 2000**. Any reservations made after July 21, 2000, will be charged the standard hotel rate.

Hotel check-in time is 3:00 p.m. and check-out time is 12:00 p.m. Guaranteed reservations will be held until midnight on the expected day of arrival. Deposits are refundable if notice of cancellation is given to the hotel at least 48 hours prior to the date of expected arrival. If cancellation is not made at least 48 hours prior to the date of expected arrival, the deposit will be forfeited.

## TRANSPORTATION

The Adam's Mark Hotel is located in the Westchase Business District of West Houston. It is equidistant from both of Houston's major airports. Using the Sam Houston Tollway, the hotel is 45 minutes from Bush Intercontinental and Hobby Airports. Airport transportation may be arranged through Coach USA Express Shuttle, 1-800-334-4441 or 713-670-3254. The cost for this shuttle service is \$21 for one-way transport and \$37 for round trip.

## PARKING

Free parking is available for hotel guests.

# REGISTRATION

---

## Gulf of Mexico Hydrates R&D Planning Workshop

(PLEASE PRINT OR TYPE)

Name \_\_\_\_\_

Affiliation \_\_\_\_\_

Address \_\_\_\_\_ MS - \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip Code \_\_\_\_\_ Country \_\_\_\_\_

Phone Number \_\_\_\_\_ Fax Number \_\_\_\_\_

E-mail Address \_\_\_\_\_

Do you request a vegetarian meal? ☐ Yes ☐ No

Are you a U.S. citizen? ☐ Yes ☐ No

If not, list citizenship \_\_\_\_\_

**Non-U.S. citizens wishing to attend must submit a Foreign National Visitor's form at least 30 days prior to the meeting. Please read the Foreign National Visitor Notice under General Information for instructions.**

Are you a U.S. Government Employee? ☐ Yes ☐ No

**Registration Fees: \$70.00 - Non-Federal / \$58.00 - U.S. Government**

**Registration fees cannot be refunded after July 21, 2000**

Make your check or money order for the registration fee payable to the **Adam's Mark Houston** and mail to:

**NETL Event Management**  
National Energy Technology Laboratory  
P.O. Box 880, MS-K07  
3610 Collins Ferry Road  
Morgantown, WV 26507-0880

or complete the credit card information below and fax to **304 285-4459**.

☐ Visa ☐ MasterCard ☐ Discover ☐ American Express ☐ Diner's

Credit Card Account No.: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Exp. Date: \_\_\_\_\_ - \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**(Remember to attach the participation preference form and, if needed, the foreign national visitor's form.)**

# PARTICIPATION

---

## Gulf of Mexico Hydrates R&D Planning Workshop

(PLEASE PRINT OR TYPE)

Name \_\_\_\_\_

Affiliation \_\_\_\_\_

### Breakout Session

If you plan to attend the workshop, you will be expected to actively participate in one of the facilitated breakout sessions listed below. Please indicate your first and second choice, and we will try to accommodate you as best as possible.

(Indicate 1st and 2nd choice)

- \_\_\_\_\_ Drilling Safely
- \_\_\_\_\_ Long-Term Production Through Hydrates
- \_\_\_\_\_ Sea Floor Stability
- \_\_\_\_\_ Resource Characterization
- \_\_\_\_\_ Production Technology

### Poster Session

If there is adequate response, we will offer a poster session during the evening reception on Wednesday, August 9. Please indicate below if you would like to present a poster display.

- \_\_\_\_\_ Yes, I will present a poster display.

### JIP Industry Briefing

Industry participants who intend to fund JIPs should attend the special invitation briefing during the afternoon of the second day after the hydrates workshop. Please indicate your interest for this invitational briefing below.

- \_\_\_\_\_ Yes, I want to attend the post-workshop JIP industry briefing.

**(Please include this form with your registration form, and, if needed, the foreign national visitor's form. Mail or fax to NETL Event Management by July 21, 2000.)**

**U.S. DEPARTMENT OF ENERGY**  
**Request for Foreign National**  
**Unclassified Visit or Assignment**

PRIVACY ACT STATEMENT - Collection of the information is authorized pursuant to the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011, and the Department of Energy Organization Act, Pub. L. No. 95-91. The primary purpose of the requested information is to determine unclassified access to facilities operated by the Department of Energy (DOE) or its contractors. Access to the information collected may be provided to appropriate Federal agencies for law enforcement purposes. Collection of the information is mandatory. Failure to provide the information may result in denial of access to DOE or contractor facilities and their personnel.

**PART I - PERSONAL DATA**

1. Name of Visitor (Family, Given, Middle)		2. Visitor Number		3. Request Number	
4. Gender of Visitor Male [ ] Female [ ]		5. Place of Birth (City, Country)		6. Date of Birth (MON-DD-YYYY)	
7. Country of Citizenship		8. Passport Number		9. Expiration Date (MON-DD-YYYY)	
10. Immigrant Alien Y/N [ ]	11. Type of Visa		12. Expiration Date (MON-DD-YYYY)	13. Work Telephone	14. Fax Number
	11a. Visa No.				
15. Name and Address of Current Employer			16. Name and Address of Place of Work (if different from 15)		
Name:			Name:		
Street:			Street:		
City: State/Province:			City: State/Province:		
Zip Code: Division:			Zip Code: Division:		
Country:			Country:		
E-Mail Address:			E-Mail Address:		
17. Title, Position, or Description of Visitor's or Assignee's Duties					

17a. Subject Area of Visit/Assignment

**Gulf of Mexico Hydrates R&D Planning Workshop**